

LID WITH WINDOW HERMETICALLY SEALED  
TO FRAME, AND A METHOD OF MAKING IT

ABSTRACT OF THE DISCLOSURE

5 An apparatus (10) includes a digital micromirror  
device (16) disposed within a housing (11) that has an  
opening (13) hermetically sealed by a lid (17). The lid  
includes a radiation transmissive window (22) with  
peripheral edges fixedly coupled by an annular sealing  
section (23) to a metal frame (21). The sealing section  
engages a frame surface oxidized in a wet nitrogen  
furnace. The sealing section melts at a temperature  
10 lower than the window or frame. The sealing section  
includes two center rings (151, 152) made of sealing  
glass that are respectively bonded to the window and  
frame and to each other. The sealing section also  
includes inner and outer rings (152, 157, 158) made of  
15 sealing glass and disposed on opposite sides of the  
center rings to protect the center rings from  
environmental factors.